

ADDITIONAL NOTES ON THE GENUS *LIPPIA*. XX

Harold N. Moldenke

LIPPIA Houst.

Additional bibliography: Ulrich, Internat. Wörterb., ed. 1, 128. (1871), ed. 2, imp. 1, 128 (1872), and ed. 2, imp. 2. 1875; Diels, Engl. Bot. Jahrb. 29: 547. 1900; Rusby, Bull. Torrey Bot. Club 27: 80. 1900; K. Schum., Justs Bot. Jahresber. 28 (1): 496--497. 1900; Ulrich, Internat. Wörterb., ed.3, 128. 1917; Nair, Ramachandran, Ramesh, Nagarajan, & Subramanian, Indian Journ. Chem. 11: 1316--1317. 1973; Anon., Biol. Abstr. 58: 1760. 1974; Balgooy, Pacif. Pl. Areas 3: 244. 1975; B. C. Stone, Henderson Malay Wild Fls. App. 16. [1977]; Lindquist, Royas Rep. Argent. Zon. Limit. 89. 1982; Mold., Phytologia 56: 380 & 420--447. 1984.

LIPPIA ABYSSINICA (Otto & Dietr.) Cuf.

Additional bibliography: K. Schum., Justs Bot. Jahresber. 28 (1): 496. 1900; Mold., Phytologia 56: 358. 1984.

LIPPIA BURTONII J. G. Baker

Additional bibliography: K. Schum., Justs Bot. Jahresber. 28 (1): 496. 1900; Mold., Phytologia 48: 163. 1981.

LIPPIA CALLICARPAEFOLIA H.B.K.

Additional bibliography: Briq., Bull. Herb. Boiss., ser. 1, 4: 341. 1896; Mold., Phytologia 56: 427--428. 1984.

LIPPIA HIRSUTA var. *MORITZII* (Turcz.) López-Palacios

Additional bibliography: K. Schum., Justs Bot. Jahresber. 28 (1): 497. 1900; Mold., Phytologia 56: 444--445. 1984.

LIPPIA KITUIENSIS Vatke

Additional synonymy: *Lippia? kituiensis* Vatke, Linnaea 43: 528. 1882. *Lippia (?) kituensis* Vatke apud K. Schum., Justs Bot. Jahresber. 28 (1): 496. 1900.

Additional bibliography: Mold., Phytologia 48: 176--177. 1981.

LIPPIA LACUNOSA Mart. & Schau.

The corollas are described as having been "rose" on Héring & al. 538 & 7493 and "rose, the center yellow" on Héring & al. 4827 & 5392 and Mendonça & Noqueira 147, "rose-lilac" on Héring 15902, "lilac" on Héring & al. 644, "lilac, the throat yellow" on Pereira 288, "avermelhadas" on Héring & al. 205, and "roseo-avermelhas o centro amarelado" on Héring & al. 5088.

Material of *L. lacunosa* has been misidentified and distributed in some herbaria as *L. eupatorium* Schau.

Additional citations: BRAZIL: Distrito Federal: Héring & al. 644 (N); Héring, Filgueiras, Mendonça, & Pereira 7493 (N, W--

2971676); Héring, Figueiras, Mendonça, Pereira, Héring Salles, & Silva 4827 (N), 5088 (N), 5392 (E--2978861, N); Héring, Paula, Mendonça, & Héring Salles 205 (E--2770491), 538 (N), 644 (W--2926627); Mendonça & Nogueira 147 (N); Pereira 288 (N, W--2958143). Goiás: Hatschbach 43073 (Ld); Héring 15902 (N).

LIPPIA LACUNOSA var. *ACUTIFOLIA* Mold.

Additional bibliography: Brenan, Ind. Kew. Suppl. 16: 166. 1981; Mold., Phytologia 48: 177. 1981.

LIPPIA LAMIANA (Mold.) Mold., Phytologia 53: 461. 1983.

Synonymy: *Lantana lamiana* Mold., Lilloa 5: 413. 1940.

Bibliography: Mold., Lilloa 5: 413. 1940; Mold., Known Geogr.

Distrib. Verbenac., ed. 1, 40. 1942; Mold., Alph. List Cit. 1: 264. 1946; H. N. & A. L. Mold., Pl. Life 2: 68. 1948; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 99 & 188. 1949; Mold., Résumé 116 & 459. 1959; Mold., Fifth Summ. 1: 186 (1971) and 2: 886. 1971; Mold., Phytol. 2: 177 & 555. 1980; Mold., Phytologia 53: 461. 1983.

Stems branching, the branches virgate, medium-slender, obtusely tetragonal, densely incanous with short, closely appressed, white, strigose hairs, less densely so toward the base in age; nodes very obscurely annulate; principal internodes 1.5--3.8 cm. long, mostly much abbreviated; leaves numerous, decussate-opposite; petioles obsolete or to 3 mm. long, flattened and winged, incanous-strigose; leaf-blades firmly membranous, stiff, ascending, often conduplicate, narrow-lanceolate or -oblanceolate, incanous on both surfaces, to 7.5 cm. long, 9--10 mm. wide, acute at both ends, marginally subentire or remotely dentate near the apex, densely strigose on both surfaces with short white hairs; midrib slender, subimpressed above, prominent beneath; secondaries numerous, slender, short, 5--9 per side, ascending, not much arcuate; vein and veinlet reticulation fine, nor prominent, mostly obscure or indiscernible above; heads subglobose, solitary in the uppermost leaf-axils, 1 or 2 pairs per branch, much shorter than the subtending leaves, incanous throughout.

The species is based on an unnumbered collection of T. Rojas (Hassler 9901; Herb. Osten 19904), collected on a high plateau and in declivities in the Sierra de Amambay, Paraguay, in December, 1907, and deposited in the herbarium of the Naturhistorisches Museum in Vienna. It is named in honor of my late respected colleague, Dr. Herman Johannes Lam, who did such noteworthy work on the *Verbenaceae* of the Pacific region.

Citations: PARAGUAY: T. Rojas s.n. [Hassler 9901; Herb. Osten 19904] (Ld--photo of type, N--clastotype, N--photo of type, Ug--isotype, V--type).

LIPPIA LANTANIFOLIA F. Muell.

Additional bibliography: T. B. Muir, Muellera 2: 166. 1972; Mold., Phytologia 48: 177. 1981.

LIPPIA LASIOCALYCINA Cham.

Additional bibliography: C. Muell. in Walp., Ann. Bot. Syst. 5: 707. 1860; S. Moore, Trans. Linn. Soc. Lond. Bot., ser. 2, 4: 436.

1895; Angely, S. Amer. Bot. Bibl. 2: 676. 1980; Mold., Phytologia 48: 177 (1981) and 54: 236. 1983; Raj, Rev. Palaeobot. Palyn. 39: 350, 364, 396, 400, & 403, pl. 3, fig. 4. 1983.

Additional illustrations: Raj, Rev. Palaeobot. Palyn. 39: 403, pl. 3, fig. 4. 1983.

Recent collectors describe this plant as a shrub, 2 m. tall, and have found it growing in flooded sandy clay soil at forest borders, in both flower and fruit in March. The corollas are said by Héring to be rose-color.

Additional citations: BRAZIL: Distrito Federal: Héring 16922 (E--2978845, N). Mato Grosso: Macedo, Duarte, & Assumpção 1399 (N).

LIPPIA LASIOCALYCINA var. *SAINTHILAIREI* Mold.

Additional bibliography: Angely, S. Amer. Bot. Bibl. 2: 676. 1980; Mold., Phytologia 48: 177. 1981.

Fernandes & Nunes describe this plant as a subshrub, with lilac-colored corollas, and found it growing in carrasco, in flower in November.

Additional citations: BRAZIL: Piauí: Fernandes & Nunes, Herb. Prisco Bezerra 10876 (F--1931268).

LIPPIA LAXIBRACTEATA Herzog

Additional bibliography: Mold., Phytologia 48: 178 (1981) and 50: 248. 1982.

LIPPIA LIBERIENSIS Mold.

Synonymy: *Lippia libertensis* Reis & Lipp, New Pl. Sources Drugs 252 sphalm. 1982.

Additional bibliography: Mold., Phytologia 48: 178. 1981; Reis & Lipp, New Pl. Sources Drugs 252. 1982; Mold., Phytologia 54: 232. 1983.

Folsom describes this plant as suffrutescent, erect, the bracts green, and the corollas white to yellow, and found it growing in re-growth shrubbery on cutover hillsides, in flower in May.

Material has been misidentified and distributed in some herbaria as *L. callicarpaefolia* H.B.K.

Additional citations: COSTA RICA: Puntarenas: Tonduz 4429 [1516] (W--1322892). PANAMA: Veraguas: Folsom 3099 (E--2608125).

LIPPIA LINDMANII Briq.

Additional bibliography: Brenan, Ind. Kew. Suppl. 16: 166. 1981; Mold., Phytologia 48: 178. 1981.

LIPPIA LINDMANII f. *OPPOSITIFOLIA* Mold.

Additional bibliography: Brenan, Ind. Kew. Suppl. 16: 166. 1981; Mold., Phytologia 48: 178. 1981.

LIPPIA LINEARIFOLIA Mold.

Additional bibliography: Brenan, Ind. Kew. Suppl. 16: 166. 1981; Mold., Phytologia 48: 178. 1981.

Additional citations: BRAZIL: Minas Gerais: Hatschbach 27812 (N--isotype).

LIPPIA LOJENSIS Mold., *Phytologia* 54: 235 nom. nud. (1983) and 55: 113, 115, & 116, pl. 2. 1984.

Bibliography: Mold., *Phytologia* 54: 235 (1983) and 55: 113, 115, & 116, pl. 2. 1984.

Illustrations: Mold., *Phytologia* 55: 116, pl. 2. 1984.

Citations: ECUADOR: Loja: Hart 1315 (N--isotype, W--2939976--type). MOUNTED ILLUSTRATIONS: Mold., *Phytologia* 55: 116, pl. 2. 1984 (Ld, Ld).

LIPPIA LUCENS Standl.

Additional bibliography: Mold., *Phytologia* 48: 178 (1981) and 56: 432 & 433. 1984.

Dawson and his associates describe this plant as a small tree, 10 feet tall, the stems 2 inches in diameter at the base, the leaves aromatic, and encountered it in wet ravines.

The *Molina R. 549, 1134, & 1456* distributed and previously cited by me as *L. lucens*, seem actually to be *L. controversa* Mold. instead, while *Molina R. & Molina 22835* is *L. controversa* var. *brevipedunculata* Mold.

Additional citations: HONDURAS: Comayagua: Edwards 514 (W--1588714--isotype); Yuncker, Dawson, & Youse 6003 (W--1638914).

LIPPIA LUPULINA Cham.

Additional & emended bibliography: D. Dietr., *Syn. Pl.* 3: 597. 1843; Bocq., *Adansonia*, ser. 1 [Baill., *Rec. Obs. Bot.*], 3: 244. 1863; Briq. in Engl. & Prantl, *Nat. Pflanzenfam.*, ed. 1, 4 (3a): 152. 1895; Mold., *Phytologia* 48: 179 (1981), 50: 247 (1982), and 56: 342. 1984.

Recent collectors have encountered this plant in cerrado, in flower in December, February, and March. The corollas are described as having been "lilac" on *Pereira 208*, "rose, the tube yellow" on *Heringer & al. 6202*, "purple (10 P 6/8) on *Lindeman & Haas 3055*, "with white, yellow, and rose" on *Casas & al. FC.7504* and "avermelhadadas" on *Heringer & al. 6642*. The bracts are described by *Lindeman & Haas* as having been "purple (10 P 6/6)".

The *Herbert H. Smith s.n.*, cited by me in a previous publication in this series as typical *L. lupulina*, actually represents its var. *paraguariensis* Chod.

Additional citations: BRAZIL: Distrito Federal: *Heringer, Filgueiras, Mendonça, & Pereira 6202* (N), *6642* (N); *Pereira 208* (N). Mato Grosso: *Eiten & Eiten 9034* (W--2971855); *Murça Pires & Furtado 17174* (Ld). Minas Gerais: *W. R. Anderson 8741* (W--2755316); *Regnell III.1620* [10/10/1868] (W--1232005, W--132006); *Williams & Assis 6618* (W--1932760). Pará: *Prance, Silva, Berg, Henderson, Nelson, Balick, Bahia, & Santos P.24796* (W--2868550), *P.25103* (W--2868559). Paraná: *Hatschbach 26798* (Ba), *31062* (Ba); *Lindeman & Haas 3055* (Ws). PARAGUAY: *Casas, Hahn, & Schinini FC.7504* (N). MOUNTED ILLUSTRATIONS: *Ferre, Pl. Bras. Esp. Cerrado* [145], fig. 61. 1969 (Ld).

LIPPIA LUPULINA f. *ALBA* Mold., *Phytologia* 56: 342. 1984.

Synonymy: *Lippia paraguariensis* Briq. in *Chod. & Hassler, Bull. Herb. Boiss.*, ser. 2, 4: 1163--1164. 1904. *Lippia lupulina* var.

albiflora Troncoso, Darwiniana 12: 258 & 289--291. 1961. *Lippia paraguariensis* Briq., Chod., & Hassl., in herb.

Bibliography: Briq. in Chod. & Hassler, Bull. Herb. Boiss., ser. 2, 4: 1163--1164. 1904; Briq. in Chod. & Hassler, Pl. Hassler. 2 (11): 499. 1904; Prain, Ind. Kew. Suppl. 3: 104. 1908; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 41 & 96. 1942; Mold., Lilloa 8: 425 (1942) and 10: 378--379. 1944; Mold., Alph. List Cit. 1: 264 (1946) and 3: 693, 1949; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 99 & 190. 1949; Mold., Résumé 117 & 462. 1959; Troncoso, Darwiniana 12: 258 & 289--291, pl. 4, & fig. 17. 1961; Hocking, Excerpt. Bot. A.5: 586. 1962; Mold., Résumé Suppl. 5: 5--7. 1962; Mold., Phytologia 12: 271. 1965; Mold., Fifth Summ. 1: 186 (1971) and 2: 563 & 892. 1971; Mold., Phytologia 39: 171. 1978; Mold., Phytol. Mem. 2: 179. 1980; Mold., Phytologia 48: 179. 1981.

Illustrations: Troncoso, Darwiniana 12: 290, pl. 4 & fig. 17. 1961.

Inasmuch as this plant seems to differ from the typical form of the species only in its white corollas, modern practice would indicate nothing higher than form rank for it, and the only epithet available for it in that category is *alba*.

Citations: PARAGUAY: Casas & Molero FC.6409 (N--type; Hassler 7802 (It--photo, Kr--photo, N, N--photo, W--photo); Pedersen 9428 (N, W--2883280). MOUNTED CLIPPINGS: Briq. in Chod. & Hassler, Bull. Herb. Boiss., ser. 2, 4: 1163--1164. 1904 (W).

LIPPIA LUPULINA var. PARAGUARIENSIS Chod.

Additional bibliography: Mold., Phytologia 48: 179. 1981.

Casas & Molero describe this plant as 50 cm. tall, growing in sandy soil of cerrado. The Smith collection, cited below, was previously erroneously cited by me as typical *L. lupulina*. It certainly also bears striking resemblance to *L. diamantinensis* Glaz.

Additional & emended citations: BRAZIL: Distrito Federal: Irwin & Soderstrom 5150 (W--2630582). Mato Grosso: Herbert T. Smith s.n. [Herb. Mus. Nac. Rio Jan. 14876] (Ja--14876, W--1199748). PARAGUAY: Casas & Molero FC.6374 (N).

LIPPIA MARTIANA Schau.

Additional bibliography: Mold., Phytologia 48: 180. 1981; Silva, Sano, & Silva, An. Congres. Nac. Bot. 32: 21. 1981.

Recent collectors describe this plant as a shrub, the leaves "coriacea escassa", and have encountered it among disturbed cerrado vegetation, in flower in February. The corollas are said to have been "white" on Héring & al. 6509.

Additional citations: BRAZIL: Distrito Federal: Héring & Filgueiras, Mendonça, & Péraire 6509 (W--2926786); Héring & Paula, Mendonça, & Salles 361 (Ld, N, N); Herb. Tax. Class Univ. Bras. 367 (W--2975916). Goiás: W. R. Anderson 10228 (W--2755317); Irwin, Gear, Souza, & Santos 13726 (W--2630584).

LIPPIA MATTOGROSSENSIS Mold.

Additional bibliography: Mold., Phytologia 48: 180. 1981.

Additional citations: BRAZIL: Mato Grosso: W. R. Anderson 9857 (W--2755322); Irwin, Souza, Gear, & Santos 16787 (W--2630585), 17457 (W--2630583).

LIPPIA MCVAUGHI Mold.

Additional bibliography: Mold., *Phytologia* 48: 180 (1981) and 54: 230. 1983; Knobloch, *Phytol. Mem.* 6: 45. 1983; Mold., *Phytologia* 55: 43 (1984) and 56: 426 & 427. 1984.

Recent collectors describe this plant as an understory shrub, 2--3 m. tall, or as a tree, 5--6 m. tall, "la corteza parda, fisurada y se desprende en largas tiras", and the bracts white or greenish-white. They have found it growing in dry forests on a granitic substrate with *Bursera* and *Cochlospermum*, low deciduous woods, and secondary deciduous woods on metamorphic soil, at 200--250 m. altitude, in flower in February, and in fruit in February, May, and August. They report the vernacular name, "cuero de venado". The corollas are said to have been "white" on *Magallanes* 310 & 2754 and "yellowish" on *Magallanes* 982. The *Magallanes* 2754 collection is very typical of the species in all respects.

Material of *L. mcvaughi* has been misidentified and distributed in some herbaria as *L. bracteosa* (Mart. & Gal.) Mold., *L. callicarpae-folia* H.B.K., and *L. nutans* Robinson & Greenm.

Additional citations: MEXICO: Colima: McVaugh & Koelz 1660 (W--2452252--isotype). Jalisco: *Magallanes* 310 (Me--234439), 982 (Ld), 2754 (Ld). Michoacán: Neill 5339 (Ld). Oaxaca: Conzatti 3202 (W--1082244); Reko 3579 (W--888474).

LIPPIA MCVAUGHI var. *LATIFOLIA* Mold., *Phytologia* 55: 43. 1984.

Bibliography: Mold., *Phytologia* 55: 43. 1984.

Citations: MEXICO: Jalisco: Pérez J. 389 (Ld--type).

LIPPIA MEDICA Fenzl ex Baill., *Hist. Pl.* 11: 94. 1891.

Bibliography: Baill., *Hist. Pl.* 11: 94. 1891; Mold., *Phytologia* 50: 255 & 269. 1982.

Nothing is known to me about this puzzling taxon.

LIPPIA MICROCEPHALA Cham.

Additional & emended bibliography: C. Muell. in Walp., *Ann. Bot. Syst.* 5: 707. 1860; Bocq., *Adansonia*, ser. 1 [Baill., *Rec. Obs. Bot.*], 3: 244. 1863; Wehmer, *Pflanzenst.*, ed. 1, 646. 1911; Hubert, *Trav. Lab. Mat. Méd. Fac. Pharm.* 13: [Verb. Util. Mat. Méd.] 41--42. 1921; Wehmer, *Pflanzenst.*, ed. 2, 1021. 1931; Mold., *Phytologia* 48: 180. 1981.

Recent collectors describe this plant as a shrub, 1 m. tall, growing on rocky cliffs and among stones at the edge of waterfalls, in flower in February. The corollas are said to have been "apically lilac, basally white" on *Mattos Silva & al.* 258.

Wehmer (1911) reports that the air-dried leaves contain 0.006% ethereal oil and 23% resin.

Material of *Lippia microcephala* has been misidentified and distributed in some herbaria as *Lantana* sp.

Additional citations: BRAZIL: Bahia: *Mattos Silva, Santos, & Brito* 258 (N). Distrito Federal: *Herb. Tax. Class Univ. Bras.* 194 (W--2975908). Minas Gerais: *Irwin, Maxwell, & Wasshausen* 19813 (W--2630586); *Irwin, Santos, Souza, & Fonseca* 22680 (W--2863450); *Mexia* 5710 (W--1618200); *Schwacke* 14890 (W--1199716). MOUNTED CLIPPINGS:

G. Gardn., Lond. Journ. Bot. 4: 133. 1845 (W).

LIPPIA MICROMERA Schau.

Additional synonymy: *Lippia macromera* Reis & Lipp, New Pl. Sources Drugs 253 sphalm. 1982. *Lippia micromelum* Meijer & Sm. ex Mold., Phytologia 54: 243 in syn. 1983.

Additional & emended bibliography: Briq. in Engl. & Prantl, Nat. Pflanzenfam., ed. 1, 4 (3a): 152. 1895; J. T. & R. Kartesz, Syn. Checklist Vasc. Fl. 2: 467. 1980; Mold., Phytologia 48: 180--181. 1981; Liogier & Martorell, Fl. Puerto Rico 153 & 323. 1982; López-Palacios, Revist. Fac. Farm. Univ. Andes 23: 20 & 51. 1982; Reis & Lipp, New Pl. Sources Drugs 252. 1982; Mold., Phytologia 54: 234 & 243. 1983.

Recent collectors describe this plant as a shrub or subshrub, 1 m. tall, very fragrant when crushed, and have encountered it in deciduous forests, among shrubby vegetation, and in xerophytic roadside vegetation, at 20--550 m. altitude, in flower in May, August, and November. The corollas are described as having been "white" on Croat 54671 and Liesner & González 12146, "white, yellowish in the throat" on Kalloo B.688, and "white with a yellow center" on Davidse & González 19707.

López-Palacios (1982) reports that the plant is used in Venezuela in the treatment of asthma, while Reis & Lipp (1982) tell us that it is used to flavor meatloaf, stuffing, and gravy in Hawaii.

The E. C. Leonard 4116 and Leonard & Leonard 10010, distributed as *Lippia micromera*, actually are *Lantana exarata* Urb. & Ekm.

Additional citations: VENEZUELA: Anzoategui: Davidse & González 19707 (Ld). Lara: Croat 54671 (Ld); Meijer & Smith 83 (N). Sucre: Liesner & González 12146 (Ld, Ld). CULTIVATED: Trinidad: Kalloo B. 688 (N). MOUNTED ILLUSTRATIONS: López-Palacios, Fl. Venez. Verb. [433] & [434], fig. 101 & 102. 1977 (Ld, Ld).

LIPPIA MICROMERA var. *HELLERI* (Britton) Mold.

Additional bibliography: J. T. & R. Kartesz, Syn. Checklist Vasc. Fl. 2: 467. 1980; Mold., Phytologia 48: 181. 1981; Liogier & Martorell, Fl. Puerto Rico 153 & 323. 1982; Reis & Lipp, New Pl. Sources Drugs 252. 1982.

Jansen found this plant growing in sandy soil with spiny cacti and much grazing by goats in the Dominican Republic, where Jiménez describes it as "very common" at 200 m. altitude and where it is known as "orégano". The corollas are said to have been "white" on Dod & Jiménez 8963 and Jiménez 8834. Reis & Lipp (1982) cite *Lavastre* 1857 from the Dominican Republic, while Liogier & Martorell (1982) assert that in Puerto Rico it is found wild on hillsides and in thickets at middle and lower elevations and where it is also cultivated for its aromatic foliage and known as "mejorana", "orégano", "orégano chiquito", and "orégano del país".

Additional citations: HISPANIOLA: Dominican Republic: Dod & Jiménez 8963 (Lc, Ld); M. R. Jansen s.n. [1979 and 1980] (N); J. J. Jiménez 8834 (Me--282846).

LIPPIA MICROPHYLLA Cham.

Additional & emended bibliography: Bocq., *Adansonia*, ser. 1 [Baill., *Rec. Obs. Bot.*], 3: 244. 1863; Mold., *Phytologia* 48: 181--182. 1981.

Recent collectors refer to this plant as a subshrub, growing in cerrado, and have found it in flower in May and July. The corollas are described as having been "white" on *Herb. Prisco Bezerra 10403* and "yellow" on *Herb. Prisco Bezerra 8841*.

The collection by Steward and his associates, cited below, was previously misidentified and cited as the very similar *L. schomburgkiana* Schau.

Additional & emended citations: GUYANA: *Maas, Westra, & al. 3634* (N). BRAZIL: Ceará: *Fernandes & Martins, Herb. Prisco Bezerra 10403* (F--1931267). Piauí: *Fernandes & Nunes, Herb. Prisco Bezerra 8841* (F--1931273). Roraima: *Steward, Araujo, Buck, Ramos, & Ribamar 248* (N, W--2858548).

LIPPIA MODESTA Briq.

Additional bibliography: Mold., *Phytologia* 48: 182. 1981.

Novara found this plant in flower in November and describes the corollas as "yellow".

Additional citations: ARGENTINA: Salta: *Novara 2208* (E--2978864).

MOUNTED ILLUSTRATIONS: Troncoso in *Burkart, Fl. Ilust. Entre Rios* 5: 277, fig. 131. 1979 (Ld).

LIPPIA MORII Mold.

Additional bibliography: Hocking, *Excerpt. Bot. A.35*: 17 & 324. 1980; Mold., *Phytologia* 48: 182. 1981.

LIPPIA MORONGII Kuntze

Additional bibliography: Mold., *Phytologia* 48: 182 (1981) and 50: 250. 1982.

The corollas on *Cabrera & al. 28960* are said to have been "yellow" when fresh and the plant was found in anthesis in October -- it represents very well the broad-leaved form of this species.

Additional citations: ARGENTINA: Corrientes: *Cabrera, Botta, Kiesling, Rotman, Tur, & Zuloaga 28960* (N).

LIPPIA MULTIFLORA Mold.

Additional bibliography: Mold., *Phytologia* 48: 155 & 182--183. 1981.

Additional citations: MOUNTED ILLUSTRATIONS: Letouzey, *Man. Bot. For. Afr. Trop.* 2 (B): 361. 1972 (Ld); Meikle in *Hutch. & Dalz., Fl. W. Trop. Afr.*, ed. 2, 2: 437, fig. 306. 1963 (Ld).

LIPPIA MYRIOCEPHALA Schlecht. & Cham.

Additional synonymy: *Lippia myrocephala* S. & C. ex Mold., *Phytologia* 50: 262 in syn. 1982.

Additional bibliography: F. C. Seymour, *Phytol. Mem.* 1: 244. 1980; Brenan, *Ind. Kew. Suppl.* 16: 166. 1981; Mold., *Phytologia* 48: 183--184 (1981), 50: 14 (1981), 50: 241 & 262 (1982), 52: 116 & 117 (1982), and 54: 231. 1983; Raj, *Rev. Palaeobot. Palyn.* 39: 350, 364, & 396.

1983; Mold., Phytologia 56: 427, 429, 434, 440, & 447. 1984.

Recent collectors refer to this plant as a "1.5 m. perennial", as a shrub, 3--4 m. tall, or as a tree, 7--10 m. tall, with a spreading crown, the flowers "small and green". They have found it growing along roadsides, in open forests, along streams in tall forests and cafetales, on disturbed roadsides with *Trema* and *Guazuma*, on steep slopes with *Pinus*, *Quercus*, *Hauya*, *Erythrina*, *Lysiloma*, *Oreopanax*, and *Ostrya*, on steep slopes covered by evergreen cloud forest, in acahual with *Eupatorium*, *Xanthosoma robustum*, and *Heliconia*, in 15-year old acahual with *Heliocarpus donnell-smithii*, *Cordia alliodora*, and *Lonchocarpus*, and "common" in acahual along roadsides associated with *Pennisetum* and *Heliconia*. Calzada refers to it as "rare" in Veracruz, Wilbur and his associates report it "occasional" in El Salvador. Cowan and Ramos found it growing in 5-year old acahual with *Trema micrantha*, *Cecropia*, and *Hampea*. Welch and his associates encountered it "in rainforest with many bamboo-walled houses with palm-thatched roofs nestled among the trees, many lianas and mostly ascending branches covered with numerous bromeliads, ferns, mosses and orchids". These recent collections have been made at altitudes of 800 to 2300 m. and the plant has been found in anthesis from September to January and in fruit in December. The wood is used for making the frames of native grass huts and for other purposes. The vernacular names, "colpanchi blanco", "copalillo blanco", "macahuité", and "tatascame".

The corollas are described as having been "cream"-color on Cowan 2708, "white with a yellow center" on Stevens & Riviere 20882, "yellowish" on Williams & al. 43204, "pale-yellow" on Wilbur & al. 16328, "dull-yellowish" on Standley 20628, and "cream & yellow" on Breedlove 23258.

A particularly small-leaved form (annotated in an unknown hand "*Lippia myriocephala* forma") is well represented by Liebmann 11357 and Heyde & Lux 4388.

Material of *Lippia myriocephala*, in its nomenclaturally typical form, has been misidentified and distributed in some herbaria as *L. callicarpaefolia* H.B.K., *L. hypoleia* Briq., *L. substrigosa* Turcz., and *L. umbellata* Cav. On the other hand, the Calderon 450, 1995, & 2252, Gentry & al. 20391, Herb. Nac. Costarric. 8452, Johnson 46, Liebmann 11256, 11258, 11270, & 11272, Mohr 327, Nee 23224, Nelson 3075, Pittier 1907 & 7111, Standley 22939, Standley & Valerio 44201, and Williams & Molina R. 13170 are *L. myriocephala* var. *hypoleia* (Briq.) Mold., while Herb. Nac. Costarric. 13032 & 13215, Heyde & Lux 4385, Heyde 236, Holway 372, Liebmann 11228, Miranda 5565 & 573L, Ørsted 11223, 11241, & 11247, Padilla 5 & 10, Pittier 7519 & 13032, Stork & Horton 8646, Tonduz 1460, 8452, & 13631, Tonduz & Biolley 7218, and Turckheim 8731 are *L. cardiostegia* Benth., Bratz M.125 is *L. jaliscana* Mold., Dehesa 1603, Germán & al. 406, González Ortega s.n., Harking 625, Lay & Collie s.n. [San Blas, Dec. 1827 -- Feb. 1828], Lent 1783, and Nervaes Montes & Salazar 61 & 308 are *L. pringlei* Briq., Gold. 254 is *L. umbellata* Cav., and Hernández & al. 5212 is something non-verbenaceous.

Additional citations: MEXICO: Chiapas: Breedlove 23258 (Me--223726), 42691 (Me--255761); Hill & Cowan 1525 (Me--256632); Miranda

5720 (Me--71049); *Matuda* 610 (Me--86157, W--1689566), 707 (W--1689523), 3642 (Me--86186). San Luis Potosí: *Roe & Roe* 2362 (W--2516415); *Welch, Dunn, Robertson, Case, Torke, & Brown* 107 (Au). Tabasco: *Cowan & Ramos* s.n. [C. Cowan 2712] (N). Tamaulipas: *Viereck* 949 (W--1687463), 950 (W--1687464). Veracruz: *Calzada* 1666 (Me--258834); *Dioscoreas* 9961 (Me--176165); *Estrada & al.* 765 (Me--270280); *González Leija & Garza* 6726 (Me--139142), 6883 (Me--139148), 9961 (Me--179817), 9967 (Me--179815), 10095 (Me--179810), 10115 (Me--179809). State undetermined: *Liebmann* 11357 [Cuesta de San Pedro] (W--1315108); *Rovirosa* 636 (Me--84704). GUATEMALA: Alta Verapaz: *Türkheim* 7933 (W--1322945); *Williams, Molina R., & Williams* 42067 (Mi); *Williams, Molina R., Williams, & Molina* 43204 (Mi). Amatitlan: *Kellerman* 6293 (W--2442870). El Petén: *Contreras* 5446 (Ws). Sacatepéquez: *J. D. Smith* 1450 (W--1322939). Santa Rosa: *Heyde & Lux* 4386 (W--1322946), 4388 (W--1322942). Sololá: *Holway* 678 (Ld, W--862977, W--862978). Department undetermined: *Heyde* 575 (W--247506), 598 (W--247505); *Pittier* 1875 [Ipala] (W--578274); *Schwabe* s.n. [Volcan Pacaya, 31 Dec. 1976] (Me--220041). EL SALVADOR: Ahuachapan: *P. C. Standley* 20164 (W--1136023). San Salvador: *P. C. Standley* 20628 (W--11364611). Santa Ana: *Wilbur, Almeda, & Luteyn* 16328 (Me--165889). San Vicente: *P. C. Standley* 21536 (W--1137335). Sonsonate: *Allen* 7224 (W--2296984). Department undetermined: *Rovirosa* 636 [Famulte, Cesnique] (W--1322941). NICARAGUA: Matagalpa: *Stevens, Moreno, & Elmquist* 21280 (Ld); *Stevens & Riviere* 20882 (Ld).

LIPPIA MYRIOCEPHALA var. *HYPOLEIA* (Briq.) Mold.

Additional synonymy: *Lippia hipoleia* S. & C. ex Mold., *Phytologia* 50: 262 in syn. 1982. *Lippia pycnocephala* H. R. ex Mold., *Phytologia* 52: 128 in syn. 1982.

Additional bibliography: *F. C. Seymour*, *Phytol. Mem.* 1: 244. 1980; *Brenan*, *Ind. Kew. Suppl.* 16: 166. 1981; *Mold.*, *Phytologia* 48: 183 (1981), 50: 262 (1982), 52: 117 (1982), and 54: 231. 1983; *Raj*, *Rev. Palaeobot. Palyn.* 39: 350, 364, 383, & 396. 1983; *Mold.*, *Phytologia* 56: 427 & 440. 1984.

Recent collectors refer to this plant as a shrub, 1--5 m. tall, a treelet, or a small to tall tree, 2--13 m. tall, unpleasantly aromatic, the stems to 6 inches in diameter, the bark pale and fissured, the "heads" lavender, and the flowers slightly odorless. They have found it growing on wooded slopes, in elfin cloudforests and ordinary cloudforests, in seasonal evergreen forests along stream slopes, in secondary high evergreen forests, moist forests, mixed subtropical forests, secondary deciduous oak forests, in secondgrowth, on slopes with *Quercus*, *Dodonaea*, and *Calliandra* or with *Pinus* and *Liquidambar*, in disturbed forests of *Quercus*, *Liquidambar*, and *Clethra*, on slopes and along small streams with tropical rainforest along the ridges, in acahual, and in acahual with *Eupatorium*, *Xanthosoma robustum*, and *Heliconia*, at 300--2000 m. altitude, in flower from January to March, May, and September to December, and in fruit in November, January, and February.

Nee found the variety common in much disturbed deciduous forests on steep rocky (calcareous) slopes with maize fields and patches of secondgrowth brush dominated by *Alnus acuminata* ssp. *arguta*; *Williams*

and Molina report it as "common in forests and the edges of clearings". Smyth refers to it as a common shrub on dry hillsides in Veracruz, while Standley reports it "frequent" in Costa Rica and "common on volcano crater rim" in El Salvador.

The corollas are described as having been "white" on Breedlove 26515, Breedlove & Thorne 20947, Moreno 206, Norris 17377, Rosas R. 715, and Zola B. 24 & 672, "white with a yellow eye" on Douglas 19004, "whitish with a mustard-colored eye" on Lundell 17632, "cream" on Araquistain & al. 1726 and Martínez & Calderón 1211, "dull-white and lavender" on Johnson 46, "pale-yellow" on Dressler & Jones 190, "verdoso-cafe" on Dorantes & al. 1695, "verde-cafe" on Vazquez T. 65, and "cafe" on Araquistain & Sandino 1432.

Vernacular names reported for the variety are "carbonero", "cutujuma", "calpanchi", "tamiagua", and "tatascame". The wood is used by the natives to make charcoal.

A notation accompanying *Purpus* 8648 reads "leaves entire and more glabrous", but this is not true of the U. S. National Herbarium sheet of this collection.

Material of this variety has been misidentified and distributed in some herbaria as typical *L. myriocephala* Schlecht. & Cham., *L. callicarpaefolia* H.B.K., *L. graveolens* H.B.K., *L. umbellata* Cav. *Buddleia* sp., and even *Compositae*. On the other hand, the *Dioscoreas* 9961, Esytada & al. 765, Miranda 5720, and Wilbur & al. 16328, distributed as *L. myriocephala* var. *hypoleia*, actually represent the typical *L. myriocephala* Schlecht. & Cham., while Contreras 9641 is *L. umbellata* Cav. and Dorantes & al. 1126 is probably a species of *Varronia*.

Additional citations: MEXICO: Chiapas: Breedlove 26515 (Me--199263), 28136 (Me--231870), 36623 (Me--255179); Breedlove & Thorne 20947 (Me--99257); Matuda 3630 (Me--86185); E. W. Nelson 3075 (W--234012); Ton 1724 (Me--121637), 1784 (Me--121362), 3692 (Me--133270). Chihuahua: Berlandier 739 (W--81754); Liebmann 11256 (W--1315068), 11258 (W--1315069). Hidalgo: Norris 17377 (Me--255026). Puebla: Boege 1947 (Me--96104); Gentry, Barclay, & Arguelles 20391 (W). San Luis Potosi: Edw. Palmer 1137 (W--82068). Tamaulipas: Vela G. 1774 (Me--222146). Veracruz: Balls 5489 (W--1793856); Beaman 6429 (Me--258951); Botteri 881 (W--242024); Bourgeau 1471 (W--78510), 2983 (W--78513); Dorantes, Acosta, Calles, & Marquez 1695 (Au); Dressler & Jones 190 (Me--43011, W--2328442); González Leija & Garza 10052 (Me--179813); Greenman 274 (W--752602); Liebmann 11270 (W--1315073), 11272 (W--1315074), 11273 (W--1315075); Martínez Calderón 1211 (Me--140598, Me--140599, Mi); Mohr 327 (W--771833); M. Nee 23224 (N); Ortega & al. 24 (Me--214553); *Purpus* 421 (W--470241), 2254 (W--840372), 5751 (W--464429), 8648 (W--1169628); Rosas R. 715 (Me--118849); Rzedowski 18956 (Me--91619); Seler & Seler 3649 (W--1205654); C. L. Smith 1076 (Me--86159, W--312560); Smyth 169 (W--1209017); Sousa 2559 (Me--113187), 2647 (Me--112549); Taylor & Taylor 7277 (W--2914927); Vazquez T. 32 (Me--264932), 65 (Me--264897); Zola B. 24 (Me--271784), 672 (Me--232923, Me--260648). GUATEMALA: Alta Verapaz: H. Johnson 46 (W--1014674); Ulrickheim II.1474 (W--860816). Baja Verapaz: Williams, Molina R., & Williams 42122 (Mi). El Petén: C. L. Lundell 17632 (Me--137927). Department undetermined:

Record & Kuylen G.90 (W--1315299). HONDURAS: Comayagua: Nelson & Vargas 2353 (Ld). Morazán: Williams & Molina R. 13710 (W--2021818). Ocotepeque: Nelson, Romero, Rubio, & Pereira 4017 (Ld). EL SALVADOR: Cuscatlan: Calderón 1995 (W--1266619). San Salvador: Calderón 450 (W--1151431); Pittier 1907 (W--578309); P. C. Standley 22868 (W--1138593), 22939 (W--1138656). Department undetermined: Calderón 2252 [Cerro de San Jacinto] (W--1266619). NICARAGUA: Estelí: Atwood A.321a (Ln--266875); W. D. Douglas 19004 (Ld). Jinotega: Araquistain, Moreno, & Sandino 1726 (Ld). Matagalpa: Araquistain & Moreno 690 (Ld); Araquistain & Sandino 1432 (Ld); Moreno 206 (Ld); Williams & Molina R. 42545 (Mi). COSTA RICA: Cartago: Lent 1097 (W--2542368); Tonduz 1876 (W--1322947). Guanacaste: Standley & Valerio 44201 (W--1253558). San José: Lems 650122 (01-08) 02 (W--2583496); Pittier 7111 [Herb. Nac. Costarr. 8452] (W--1322944).

LIPPIA MYRIOCEPHALA var. *INTEGRIFOLIA* Loes.

Additional bibliography: Mold., Phytologia 48: 184. 1981.

Additional citations: GUATEMALA: Alta Verapaz: Seler & Seler 3400 (!--1205986--cotype); Turckheim 1088 (W--1322940--cotype). EL SALVADOR: Morazan: Tucker 793 (W--2088087).

LIPPIA MYRIOCEPHALA var. *OVATIFOLIA* (Mold.) Mold.

Additional bibliography: Brenan, Ind. Kew. Suppl. 16: 166. 1981; Mold., Phytologia 48: 184. 1981.

LIPPIA MYRIOCEPHALA var. *TOMENTOSA* Mold., Phytologia 50: 14. 1981.

Bibliography: Mold., Phytologia 50: 14 (1981) and 50: 241. 1982.

Citations: MEXICO: Puebla: Bruff 1521 (Me--46996--type).

LIPPIA NANA Schau.

Additional bibliography: Mold., Phytologia 48: 184. 1981.

The Hatschbach 19716, Irwin, Souza, & Reis dos Santos, and Regnell III.948, previously cited by me as *Lippia nana*, seem actually to be *L. pumila* Cham., while Macedo 3251 is *Lantana glaziouii* Mold.

LIPPIA NEPETACEA Schau.

Additional bibliography: Bocq., Adansonia, ser. 1 [Baill., Rec. Obs. Bot.], 3: 244. 1863; Mold., Phytologia 48: 184. 1981.

LIPPIA OATESII Rolfe

Additional bibliography: Mold., Phytologia 48: 184. 1981; Reis & Lipp, New Pl. Sources Drugs 253. 1982.

Reis & Lipp (1982) cite J. C. Hopkins 10231 from Zimbabwe and report that the collector avers that this plant "keeps away snakes".

LIPPIA OAXACANA Robinson & Greenm.

Synonymy: *Lantana oaxacana* Miranda ex Mold., Phytologia 50: 261. in syn. 1982.

Additional bibliography: Mold., Phytologia 48: 184 (1981), 50: 241 & 261 (1982), and 56: 363. 1984.

Recent collectors describe this plant as a semi-woody herb, 60--80 cm. tall, or a shrub, 1.5 m. tall, with a minty odor, and have found

it growing in low deciduous forests (where Torres and his associates aver that it is abundant) with *Brahea* and *Yucca*, in regrowth woods on limestone hills, and in very dry soil with *Yucca* and cacti, at 1350--2165 m. altitude, in flower from July to November, in fruit in September. They report the vernacular names, "falsa salvia" and "oreganillo". The corollas are said to have been "white" on L. S. Smith Mex.5 and Torres & al. 1153, and "yellow" on Delgado S. & al. 568.

It should be noted that the Nelson 1588 & 1841 specimens, cited below, were annotated as "Type" by someone at the United States National Herbarium, but actually are not types -- the species is founded on Pringle 6021.

Material of *L. oaxacana* has been misidentified and distributed in some herbaria as *L. alba* (Mill.) N. E. Br. or *L. geminata* H.B.K. On the other hand, the Bravo s.n. [April 29, 1953], distributed as *L. oaxacana*, actually is *Aloysia chiapensis* Mold.

Additional citations: MEXICO: Guerrero: Pringle 8417 (W--382033); Toledo & Blanco 124 (Me--209100); Torres C., Tenorio L., & Romero de T. 1153 (Ld), Morelos: Miranda 1507 (Me--73531), 1567 (Me--73559); L. S. Smith Mex.5 (Me--99358). Oaxaca: Delgado S., García P., & Hernández M. 568 (Me--211304); E. W. Nelson 1588 (W--566385), 1841 (W--566390); Pringle 6021 (W--251966--isotype, W--1322967--isotype). Puebla: Boege 616 (Me--96101), 1929 (Me--96105); Miranda 2240 (Me--73556); Purpus 2571 (W--840564). Veracruz: Miranda 677 (Me--73565). State undetermined: Botteri 51b [Tecamahua] (Mi).

LIPPIA OBSCURA Briq.

Additional bibliography: Mold., Phytologia 48: 184--185. 1981.

Recent collectors describe this plant as a slender shrub, 1.8 m. tall, the leaves very aromatic, and the flowers fragrant or rather fragrant, occasional in mata ciliar, at 800 m. altitude, in flower in March. The corollas are said to have been "white" on Héringier & al. 3708 and Pereira & Mendonça 408.

Material of this species has been misidentified and distributed in some herbaria as *Lantana* sp.

Additional citations: BRAZIL: Distrito Federal: Héringier, Figueiras, Mendonça, Pereira, Héringier Salles, & Chagas e Silva 3708 (E--2978869, W--2900655); Pereira & Mendonça 408 (W--2971673). Parana: Smith, Klein, & Hatschbach 14604 (W--2673677), 14637 (W--2573722).

LIPPIA ORIGANOIDES H.B.K.

Additional & emended bibliography: Walp., Repert. Bot. Syst. 4: 50 & 53. 1845; Bocq., Adansonia, ser. 1 [Baill., Rec. Obs. Bot.], 3: 244. 1863; Hock, Justs Bot. Jahresber. 23 (2): 76. 1897; Hubert, Trav. Lab. Mat. Méd. Fac. Pharm. Paris 13: [Verb. Util. Mat. Méd.] 2 & 44. 1921; Mold., Phytologia 48: 185. 1981; López-Palacios, Revist. Fac. Farm. Univ. Andes 22: 20 & 51. 1982; Reis & Lipp, New Pl. Sources Drugs 252. 1982; Mold., Phytologia 50: 245 (1982) and 54: 236. 1983.

Recent collectors describe this plant as a small shrub, 1--2 m. tall, aromatic, the branches arched and subsucculent, and the flowers

very fragrant. They have encountered it in rocky terrain of the savannas on plateaus of small tepuis, at 100 m. altitude, in flower in March, May, July, and August, and in fruit in July. They report the vernacular name, "salvinha".

López-Palacios reports that the plant is used by natives in the treatment of asthma, while Hill and his associates tell us that its leaves are used as a tea to treat stomach troubles. Reis & Lipp (1982) cite Steiermark 58601 and note that the "leaves boiled in water with guarapo (sugar drink) used for colds", reporting the native name, "chara-ceúr".

The corollas are said to have been "white" on Bunting 6216, Hill & al. 12918, Liesner & González 11996 & 12148, and Prance & Huber 28380.

Additional citations: COLOMBIA: Magdalena: Dugand 6262 (W--2457488); Haught 3887 (W--1708637), 6644 (W--2046231). Santander: St. John 20718 (W--2107515). VENEZUELA: Bolívar: Davidse, Ramia, & Montes 4747 (Me--268505); Maguire 32657 (W--2279173); Prance & Huber 28380 (Ld). Distrito Federal: Curran & Haman 966 (W--1043978). Falcón: Curran & Haman 606 (W--1010926). Sucre: Liesner & González 11996 (Ld), 12145 (E--2930317). Zulia: Bunting 6216 (Ld). BRAZIL: Minas Gerais: Schwacke s.n. [Herb. Mus. Nac. Rio Jan. 14894] (W--1199725); Ule 2671 [Herb. Mus. Nac. Rio Jan. 14896] (W--1199797). Roraima: Maguire & Maguire 40022 (W--2279249). CULTIVATED: Brazil: Hill & al. 12918 (Ld). MOUNTED ILLUSTRATIONS: López-Palacios, F. Venez. Verb. [439], fog. 103. 1977 (Ld).

LIPPIA OXYCNEMIS Schau.

Additional bibliography: Mold., *Phytologia* 48: 185. 1981.

Recent collectors describe this plant as a shrub, 1.5 m. tall, with aromatic pubescent leaves, and have encountered it in cerrado and "near brejo", in anthesis in April and July.. The corollas are said to have been "reddish" on Héring & al. 7210 and "rose" on Pereira 465.

Additional citations: BRAZIL: Distrito Federal: Héring, Filgueiras, Mendonça, & Pereira 7210 (N, W--2941379); Irwin, Gear, Souza, & Reis dos Santos 15636 (W--2863362), 18034 (W--2630566); Pereira 465 (N, W--2971679); Sucre 750 (W--2564914). Minas Gerais: Williams & Assis 7206 (W--1932936).

LIPPIA OXYPHYLLARIA (Donn. Sm.) Standl.

Additional bibliography: Pittier, *Prim. Fl. Costaric.* 2: 207.

1898; Mold., *Phytologia* 48: 185 (1981) and 56: 427 & 432. 1984.

Recent collectors describe this plant as a slender, bushy shrub, 1--2.5 m. tall, or a small tree or treelet, 3--5 m. tall, the stems 5--7.5 cm. in diameter at breast height, and the flowers fragrant. They have found it growing on lava flows, in open badly gullied lava fields, and woods adjacent to grassy slopes on lava flows, at 200--1900 m. altitude, in flower from December to March and in June, in fruit in March and December. Little refers to it as "common in groves at the edge of savannas on soil of volcanic dust and pumice and lava boulders" and in evergreen rainforests.

The corollas are said to have been "yellow on Hammel 1598, Molina

R. 3077, Tyson 7280, and Wilbur & Teeri 13337 and "pale-yellow" on Wilbur & al. 15309.

Material of this species has been misidentified and distributed in some herbaria as *L. callicarpaeifolia* H.B.K., *L. substrigosa* Turcz., and *L. umbellata* Cav.

Additional citations: HONDURAS: Morazán: Molina R. 3077 (W--2022485). COSTA RICA: Puntarenas: Pittier 3951 (W--1322985--cotype), 10632 (W--1322984); Tonduz 6667 (W--1322983--cotype). PANAMA: Chiriquí: P. H. Allen 1008 (W--1976216), 1541 (W--1820117); Davidson 793 (W--1820756); Hammel 1598 (Ld); Little 6071 [U. S. For. Serv. 95251] (W--1842538); Maurice 693 (W--1844123); Pittier 3336 (W--677719); Tyson 7280 (Me--202468); Wilbur, Almada, Luteyn, & Utley 15309 (Me--165882); Wilbur & Teeri 13337 (Me--165898). Coclé: R. S. Williams 151 (W--1208090). MOUNTED ILLUSTRATIONS & CLIPPINGS: Mold. in Woodson, Schery, & al., Ann. Mo. Bot. Gard. 60: 68, fig. 4. 1973 (Ld); Donn. Sm., Bot. Gaz. 23: 249. 1897 (W); Pittier, Prim. Fl. Costaric. 2: 207. 1898 (W).

LIPPIA PALMERI S. Wats.

Additional bibliography: Rzedowski, Veget. Mex. 360. 1978; Mold., Phytologia 48: 255. 1981; Reis & Lipp, New Pl. Sources Drugs 252. 1982; Knobloch, Phytol. Mem. 6: 88. 1983; Mold., Phytologia 54: 230 (1983) and 56: 439. 1984.

Recent collectors describe this plant as a small shrub, 1.5--2 m. tall, many-branched, and have found it growing in low matorral, on south-facing slopes, hillsides, and arid hilltops, on low hills and flats, basaltic hills, and in association with *Jatropha cinerea*, *Lysiloma candida*, and *Gochnatia arborescens*, with *Pachycereus*, *Larrea*, *Bursera*, *Fouquieria*, *Opuntia*, *Machaerocereus*, and *Stenocereus*, and with *Prosopis*, *Calliandra*, *Lantana*, and *Ruellia*. Daniel refers to it in one locality as "frequent" and in another as "infrequent". Collectors have encountered it at 5--300 m. altitude, in flower from January to April and in October, in fruit in January, April, and October. The vernacular name, "oregano", is reported for it.

The corollas are said to have been "white" on Carter 2667 and Gentry 3007, "purplish" on Daniel 2437, and "purple" on Daniel 2459. The young leaves are very densely white-pubescent on Ortega 5509. Reis & Lipp (1982) cite Carter & Moran 5381.

Rzedowski (1978), quoting Shreve (1951), states that in Baja California *Lippia palmeri* grows in matorral in close association with *Atriplex canescens*, *Suaeda fruticosa*, *Lycium carinatum*, *Maytenus phyllanthoides*, *Stegnosperma halimifolium*, and *Phaulothamnus spinescens*.

The Sousa, Germán, & Rico 8074, distributed as *Lippia palmeri*, actually is *L. graveolens* H.B.K., while Barkley & Carr 36013 is *Aloysia sonorensis* Mold. and Vaughn 621 is *Lantana macropoda* Torr.

Additional citations: MEXICO: Baja California: Ames, Hones, Kopley, Perrill, Urry, & Turner 77-62 (Me--243280); Brandegees s.n. [Sierra de la Trinidad, Nov. 1902] (W--397996); A. Carter 2667 (W--2023092); Carter, Alexander, & Kellogg 2476 (W--2022971); Carter & Ferris 3758 (W--2539503); Daniel 2437 (Mi), 2459 (Mi); Hammerly 405

(W--1896165); Nelson & Goldman 7318 (W--565400); D. M. Porter 122 (Me--48266), 300 (Me--48265); Shreve 7184 (W--1749078); S. Walker 79H28 (N); Wiggins 15399 (Me--104302); Wiggins, Carter, & Ernst 319 (Me--106634); Wiggins & Ernst 576 (Me--106633). Nuevo León: Canby, Sargent, & Trelease 192 (W--1589223). Sinaloa: Ortega 5509 (W--1207554); Rose, Standley, & Russell 13500 (W--638081). Sonora: H. S. Gentry 3007 (W--1686843); Hastings & Turner 72-56 (Me--159225); Edw. Palmer 277 (W--46705--cotype, W--1322971--cotype), 643 (W--82163--cotype, W--1322970--cotype), 644 (W--82162--cotype, W--1322970--cotype, W--1416746--cotype); Turner & Duek 79-27 (Me--295918), 79-51 (Me--294692); Wiggins 6347 (W--1684613). GULF OF CALIFORNIA ISLANDS: Coronados: Wiggins 17489 (Me--107273). Partida: Collins, Kearny, & Kempton 146 (W--1530544). Tiburón: Gold s.n. [25 Marzo 1968] (Me--117053); Wiggins 17149 (Me--106883); Wilkinson s.n. [12 October 1977] (Mi).

LIPPIA PALMERI f. *SPICATA* (Rose) Mold.

Additional bibliography: Mold., *Phytologia* 48: 255--256. 1981.

Gold encountered this plant in low matorral. in both flower and fruit in March.

Additional citations: MEXICO: Baja California: Edw. Palmer 62 (W--46706--type); D. M. Porter 380 (Me--48264); Wiggins 5539 (Me--107732), 14614 (Me). GULF OF CALIFORNIA ISLANDS: Tiburón: Gold 388 (Me--117063); I. M. Johnston 4267 (W--1316668). MOUNTED ILLUSTRATIONS: Wiggins, Fl. Baja Calif. [531], fig. 499. 1980 (Ld).

LIPPIA PAUCIFLORA Urb. ex Mold., *Phytologia* 50: 252 sphalm. 1982

This binomial is the result of an unfortunate typographic error -- the "L." should stand for "*Lantana*" rather than *Lippia*. It therefore falls into the synonymy of *Lantana pauciflora* Urb.

LIPPIA PEDUNCULOSA Hayek

Additional bibliography: Mold., *Phytologia* 48: 256. 1981.

Additional citations: BRAZIL: Alagoas: G. Gardner 1386 (W--1066571--isotype. MOUNTED CLIPPINGS: Hayek, Fedde Repert. Spec. Nov. 2: 87. 1906 (W).

LIPPIA PENDULA Rusby

Additional bibliography: Mold., *Phytologia* 48: 256. 1981.

Additional citations: BOLIVIA: La Paz: R. S. Williams 307 (W--1159328--isotype).

LIPPIA PETIOLATA Mold.

Additional bibliography: Brenan, Ind. Kew. Suppl. 16: 166. 1981; Mold., *Phytologia* 48: 256. 1981.

LIPPIA PHAEOCEPHALA Briq.

Additional bibliography: Mold., *Phytologia* 48: 256. 1981.

Additional citations: MOUNTED ILLUSTRATIONS: Troncoso, Darwiniana 12: 277, fig. 10. 1961 (Ld).

LIPPIA PLICATA J. G. Baker

Additional bibliography: K. Schum., *Justs Bot. Jahresber.* 28 (1): 496. 1900; White & Angus, *For. Fl. N. Rhodes.* 370. 1962; Mold., *Phytologia* 48: 256--257 (1981) and 56: 447. 1984.

Belsky describes this plant as a perennial herb with white corollas and found it growing in the tall grass-Acacia woodland association with *Hyparrhenia filipendula*, *Themeda triandra*, and *Diheteropogon amplexans*, in flower in May. White & Angus (1962) cites *Bull.* 3960, Carson 198, and Richards 214 from Zambia. Kahurananga and his associates describe the plant as a shrub, 2.5 m. tall, and encountered it in highland scrub-grassland, in both flower and fruit in May, the flowers "small, white, and sparse". White & Angus (1962) describe the leaves as fragrant, variable, more or less lanceolate, 3--9 cm. long, 1--3 cm. wide, rugose and usually scabrid above, puberulous beneath, the flower-heads strobiliform. about 1.5 cm. long and wide, enlarging to 5 cm. long and 2 cm. wide in fruit, the bracts foliaceous, 7 mm. long and 4.5 mm. wide, and the corollas white.

Material of this species has been misidentified and distributed in some herbaria as *L. javanica* (Burm. f.) Spreng.

Additional citations: TANZANIA: Tanganyika: Belsky 271 (Ba--394624); Kahurananga, Kibwaa, & Mungai 2583 (Mu).

LIPPIA POHLIANA Schau.

Additional bibliography: Brenan, *Ind. Kew. Suppl.* 16: 166. 1981; Mold., *Phytologia* 48: 257. 1981.

Additional citations: BRAZIL: Goiás: W. R. Anderson 8063 (W--2755319), 9995 (W--2755314). Minas Gerais: Irwin, Santos, Souza, & Fonseca 22466 (W--2863457).

LIPPIA POHLIANA var. *LONGIBRACTEOLATA* Mold.

Additional bibliography: Brenan, *Ind. Kew. Suppl.* 16: 166. 1981; Mold., *Phytologia* 48: 257. 1981.

LIPPIA POLYTRICHA Briq.

Additional bibliography: Mold., *Phytologia* 48: 257. 1981.

Additional citations: PARAGUAY: Hassler 4184 [Macbride photos 24660] (W--photo of cotype). MOUNTED ILLUSTRATIONS & CLIPPINGS: Briq., *Bull. Herb. Boiss.*, ser. 2, 4: 1158. 1904 (W); Troncoso, *Darwiniana* 12: 279. 1961 (Ld).

LIPPIA PRIMULINA var. *GOVAZENSIS* S. Moore

Additional bibliography: Mold., *Phytologia* 48: 257. 1981.

Additional citations: BRAZIL: Distrito Federal: Irwin, Souza, & Reis dos Santos 8577 (W--2630580); Pereira 81 (W--2951319).

LIPPIA PRINGLEI Briq.

Additional synonymy: *Lippia pringlei* Brign., in herb.

Additional & emended bibliography: Briq., *Bull. Herb. Boiss.*, ser. 1, 4: 340--341. 1896; K. Schum., *Justs Bot. Jahresber.* 28 (1): 497. 1900; Mold., *Phytologia* 48: 257--258 & 266 (1981) and 50: 241 & 243. 1982; Knobloch, *Phytol. Mem.* 6: 95. 1983; Mold., *Phytologia* 56: 428 & 431. 1984.

Recent collectors describe this plant as a large, single-stemmed shrub or small, conical, round-topped tree, 1.5--15 m. tall,, with heavy foliage and weak branches, the bark rather smooth and gray, the leaves fragrant with a strong lemon odor, the flower-heads greenish, and the flowers much visited by small bees. They have found it growing along roadsides and streamsides, gravel roadsides, pastures, ravines, barrancas, and secondary matorral, in deciduous and low deciduous forests, wooded quebradas, and heavily grazed secondary oak scrub, on oak-pine rocky slopes, oak-pine woods, among rank, weedy, brushy roadside vegetation in former tropical subdeciduous woodland, on dry slopes and in rocky ravines through sparse oak forests, and near the base of cliffs and talus slopes among pines and oaks, at 66--2600 m. altitude, in flower from October to March and May, in fruit from November to March and May. *Nervae Montes* & *Salazar* refer to it as abundant in moist places in Sinaloa, where *Gentry* & *Argüelles* also speak of it as "common". *Iltis* and his associates found it "very common on roadsides and among xerophytic shrubs" in Jalisco. A wood sample accompanies the *Palmer* 1199 collection. Common names reported for the species are "macuay", "nacare", "nacaré", "nacari", "tabanquillo", and "tefrozana".

The corollas are described as having been "yellow" on *Croat* 45736, *Ernst* 2446, *Gentry* & *Argüelles* 18181, *Hinton* 11717, *Miller* & *al.* 241, and *Neill* 5410, "yellowish" on *Croat* 45792 & 46081, "pale-yellow" on *Croat* 45711 and *Standley* 34678, "yellow or cream" on *Ferris* 5907, "light-cream to yellow" on *Lent* 1783, "deep-yellow fading to pale-yellow" on *Iltis* & *al.* 1144, "dark-yellow fading to very pale-yellow" on *Iltis* & *Nee* 1505, "greenish-yellow" on *Croat* 45342, "yellow and reddish" on *Langlassé* 744, "yellow at anthesis, later nearly white" on *Wiggins* 13187, "more or less white or very pale-yellow" on *Ernst* 2558, "greenish-white" on *Croat* 45324, "green" on *Vazquez T. V.* 1869, and "white" on *Langman* 3148.

Material of *Lippia pringlei* has been widely misidentified and distributed in many herbaria as *L. callicarpaeifolia* H.B.K., *L. chrysantha* Greenm., *L. myriocephala* Schlecht. & Cham., *L. umbellata* Cav., and even *Compositae*.

Additional citations: MEXICO: Colima: *Lott* & *Magallanes* 929 (Ld). Guerrero: *Croat* 45711 (Ld), 45736 (Ld); *Freeland* & *Spetzman* 127 (Me--149769); *Hinton* 11717 (Me--64800, W--1822363); *Langlassé* 744 (W--386156); *E. W. Nelson* 2285 (W--566485), 2319 (W--566483); *Edw. Palmer* 479 (W--267037, W--1689160); *Reko* 5058 (W--1269846); *Schwabe* s.n. [1^o de enero de 1977] (Me--220043). Jalisco: *Iltis*, *Guzmán M.*, & *Nee* 1144 (Ld, Mi); *Iltis* & *Nee* 1505 (Mi); *Langman* 3148 (Me); *Mexia* 1354 (W--1318291); *Miller*, *Lorence*, & *Trigos* 241 (Ld); *Pringle* 1733 (W--42739--isotype, W--1322972--isotype), 11088 (W--1586761), 11669 (W--461127); *Purpus* 508 (W--474731). México: *González Medrano* & *al.* 5385 (Me--158522); *Hinton* 7237 (W--1822265); *Matuda* & *al.* 27854 (Me--108894), 30505 (Me--64809). Michoacán: *Chiang*, *González Medrano*, & *Ramos A.* 602 (Me--153347); *Gándara* s.n. [Zamora] (Me--56593); *Germdn* & *al.* 406 (Me--282643); *Hinton* 12949 (W--1805634), 13614 (W--1805674); *E. W. Nelson* 6838 (W--399188), 6951 (W--399271). Morelos: *Bourgeau* 1217 (W--82067); *Harking* 625 (Me--64799); *Lyonnet* 1166 (Me--241024,

Me--241025): Miranda 239 (Me--73566); Paray 3014 (Me--100006); Pringle 11087 (W--460471), 13982 (W--1586768); Seler & Seler 4337 (W--1206016); Vázquez 5027 (Me--168933). Nayarit: Croat 45193 (Ld), 45324 (Ld), 45342 (Ld); Ferris 5796 (W--1491171), 5907 (W--1491170); Gentry, Barclay, & Arglles 19637 (W--2366390); Edw. Palmer 2056 (Ld, W--305636), s.n. [Tepic, Jan. 5 to Feb. 6, 1892] (W--567870); Rose, Standley, & Russell 14281 (W--637144). Oaxaca: Boege 3025 (Me--209875); Conzatti & Gonzalez 526 (W--327280); Croat 45778 (Ld), 45792 (Ld), 46081 (E--2889932); Ernst 2446 (Me--246192), 2476 (Me--270230), 2558 (Me--246193); Funk & Ramos A. 2371 (W--2968763); Jurgensen 431 [Macbride photos 24655] (W); Morton & Makrinus 2416 (W--1585435); Neill 5410 (Ld); E. W. Nelson 1840 (W--566110), 2071 (W--566490), 2090 (W--566489); Rzedowski 19280 (Me--95680); Seler & Seler 4358 (W--1206017); C. L. Smith 225 (Me). Puebla: Boege 344 (Me--96107); R. Weber 841 (Me--236215). Sinaloa: Dehesa 1603 (W--1035770); Gentry & Arglles 18181 (W--2301939); Gonzalez Ortega 4452 (Me--98674, W--1083293), 4744 (Me--98661, W--1268435), 4999 (W--1165045), 5004 (W--1165050), 5707 (W--1208729), 6548 (W--1317419), s.n. (Me--98671); Narvaez Montes & Salazar 61 (W--1035052), 308 (W--1035211); Edw. Palmer 1199 (Ld, W--209050, W--209051, W--1416742); Wiggins 13187 (Me--58648). Sonora: Gentry 1179 (W--168971). Veracruz: Vázquez T. V. 1869 (Me--265466). State undetermined: Galeotti 795j [Calea] (W--572881); Lay & Collie s.n. [San Blas, Dec. 1827 -- Feb. 1828] (W--1084827); Liebmann 11261 [Cuesta de la San Juan] (W--1315070). COSTA RICA: Cartago: Lent 1783 (Me--166024). Province undetermined: P. C. Standley 34678 [La Ventolera] (W--1226787).

LIPPIA PSEUDO-THEA (A. St.-Hil.) Schau.

Additional & emended bibliography: Lindl., Veg. Kingd., ed. 1, 663 (1846), ed. 2, 663 (1847), and ed 3, 663. 1853; Bocq., Adansonia, ser. 1 [Baill., Rec. Obs. Bot.], 3: 244. 1863; Baill., Hist. Pl. 11: 94. 1891; Briq. in Engl. & Prantl, Nat. Pflanzenfam., ed. 1, 4 (3a): 152. 1895; Hubert, Trav. Lab. Mat. Méd. Fac. Pharm. 13: [Verb. Util. Mat. Méd.] [19] & 25--26, pl. 2, fig. 9--11. 1921; Mold., Phytologia 48: 258 (1981) and 56: 436. 1984.

Additional illustrations: Hubert, Trav. Lab. Mat. Méd. Fac. Pharm. 13: [Verb. Util. Mat. Méd.] [19], pl. 2, fig. 9--11. 1921.

The *Williams & Assis 7160*, cited by me as *L. pseudo-thea* in a previous segment of these notes and so distributed, actually is *L. florida* Cham.

LIPPIA PUMILA Cham.

Additional bibliography: Mold., Phytologia 48: 258 (1981) and 56: 446. 1984.

Recent collectors describe this plant as growing from a xylopo-dium and refer to it as rather frequent on rocky campos. They have found it in flower in August and September; the corollas are said to have been "yellow" on Hatschbach 19716 and Héninger & al. 7481.

Material of *L. pumila* has been misidentified and distributed in some herbaria (and even cited by me in a previous installment of these notes) as *L. nana* Schau. On the other hand, the *Dusén 15736*, previously cited by me as *L. pumila*, seems, rather, to be *L. intermedia*

Cham.

Additional & emended citations: BRAZIL: Distrito Federal: *Irwin, Souza, & Reis dos Santos 8847* (Ld), *9085* (N, N). Minas Gerais: *Regnell III.948* (Ld--photo, N, N--photo). PARANÁ: *Hatschbach 19716* (Ld, N).

LIPPIA RAMBOI Mold.

Additional bibliography: Angely, S. Amer. Bot. Bibl. 2: 670 & 677. 1980; Mold., *Phytologia* 48: 258. 1981.

LIPPIA RAMBOI var. *PILOSA* Mold.

Additional bibliography: Angely, S. Amer. Bot. Bibl. 2: 677. 1980; Mold., *Phytologia* 48: 258. 1981.

LIPPIA RECOLLETAE Morong

Additional bibliography: Angely, S. Amer. Bot. Bibl. 2: 677. 1980; Mold., *Phytologia* 48: 258--259. 1981.

Recent collectors describe this plant as an abundant, spreading, coarse herb or subshrub, 50 cm. tall, and have encountered it on campos and in cerrado, at 320--3300 m. altitude, in both flower and fruit in December, but also in flower in February.

The corollas are described as having been "yellow" on *King & Bishop 7577*, "white and yellow" on *Casas & Schinini 7480* and *Schinini 22969*, "white, the interior of the tube deep-yellow" on *Hatschbach 45952* and *46114*, and "light-lilac with a yellow center" on *Casas & Molero FC.5912*.

This species is very closely related to *L. suffruticosa* (Griseb.) Kuntze and may better be regarded merely as a more shaggy variety of the latter, The Steinbach collection, cited below, has been distributed and cited under both names.

Additional & emended citations: BRAZIL: Mato Grosso: *Hatschbach 45952* (Ld), *46114* (Ld); *Murça Pires & Furtado 17243* (Ld). BOLIVIA: Cochabamba: *King & Bishop 7577* (E--2615859); *R. F. Steinbach 740* (W--2533616). PARAGUAY: *Casas & Molero FC.5912* (N); *Casas & Schinini 7480* (Ld); *Morong 62* (W--47866--isotype); *Schinini 22969* (Ld).

MOUNTED CLIPPINGS: Briq., Ann. Conserv. Jard. Bot. Genev. 7-8/315--316. 1904 (W); Morong, Britton, & Vail, Ann. N. Y. Acad. Sci. 7: 196--197. 1892 (W).

LIPPIA RECOLLETAE var. *PICKELII* (Mold.) Mold.

Additional bibliography: Angely, S. Amer. Bot. Bibl. 2: 677. 1980; Mold., *Phytologia* 48: 259. 1981.

Solomon describes this plant as having ascending stems and pale-pink corollas. He encountered it along open roadsides in disturbed moist tropical forests with abundant epiphytes, at 600 m. altitude, in both flower and fruit in April.

Additional citations: BOLIVIA: Tarija: *Solomon 9973* (Ld).

LIPPIA RHODOCNEMIS Mart. & Schau.

Emended synonymy: *Lippia rhodomensis* Mart. & Schau. ex Briq. in Engl. & Prantl, Nat. Pflanzenfam., ed. 1, 4 (3a): 152 sphalm. 1895.

Additional & emended bibliography: C. Muell. in Walp., Ann. Bot.

Syst. 5: 707. 1860; Briq. in Engl. & Prantl, Nat. Pflanzenfam., ed. 1, 4 (3a): 152. 1895; Mold., Phytologia 48: 259 (1981) and 50: 262. 1982.

LIPPIA RIGIDA Schau.

Additional bibliography: Mold., Phytologia 48: 259. 1981.

Additional citations: BRAZIL: Bahia: Harley, Renvoize, Erskine, Brighton, & Pinheiro in Harley 15602 (W--2791573), 15756 (W--2791586), 16708 (W--2791550).

LIPPIA RIVALIS Mold.

Additional bibliography: Hocking, Excerpt. Bot. A.35: 17 & 324. 1980; Mold., Phytologia 48: 259. 1981.

Additional citations: BRAZIL: Bahia: Hatschbach 42128 (W--2937343--isotype).

LIPPIA RONDONENSIS Mold.

Additional bibliography: Mold., Phytologia 48: 259--260 (1981) and 50: 246 & 248. 1982.

Recent collectors describe this plant as an aromatic herb or subshrub, 1 m. tall, with green bracts, and have encountered it on wet savannas and in varzea woods, at 70--200 m. altitude, in flower in January and July. It is used by natives in the form of a tea to treat upset stomachs.

The corollas are said to have been "violet" on Beck 5468 "lavender" on Gentry & al. 30738, "arroxeadas" on Cid & Lima 3500, and "purple with a yellow center" on Campbell & al. P.21214.

It seems very possible that this taxon (or, at least, some of the specimens so identified) may prove actually to represent only a form of the very variable *L. alba* (Mill.) N. E. Br., perhaps identical with its f. *intermedia* Mold. It has been misidentified as *Lantana* sp.

Additional citations: ECUADOR: Los Ríos: Gentry, Bonifaz, Loor, & Lao 30738 (Ld). BRAZIL: Amazonas: Campbell, Nelson, Ramos, & Insley P.21214 (Ld); Cid & Lima 3500 (Ld). Rondônia: Prance, Philcox, Forero, Coelho, Ramos, & Farias 5351 (W--2573137A). BOLIVIA: El Beni: S. G. Beck 5468 (Ld).

LIPPIA ROSMARINIFOLIA Anderss.

Additional bibliography: C. Muell. in Walp., Ann. Bot. Syst. 5: 707. 1860; Mold., Phytologia 48: 260. 1981.

LIPPIA ROTUNDIFOLIA Cham.

Additional bibliography: C. Muell. in Walp., Ann. Bot. Syst. 5: 707. 1860; Mold., Phytologia 48: 260 & 290--291 (1981), 50: 247 & 269 (1982), 52: 414 (1983), and 54: 236. 1983.

Irwin and his associates encountered this plant at 900 m. altitude, in both flower and fruit in June, and describe the corollas as "purple, fading to reddish-lavender in age".

The Ratter & al. R.2600, distributed and previously cited as typical *L. rotundifolia*, is now regarded as the newly described var. *bahiensis* Mold., while Héninger & al. 644 is *L. lacunosa* Mart. & Schau.

Additional citations: BRAZIL: Goiás: *Irwin, Souza, Gear, & Reis dos Santos 17922* (W--2863363); *Macedo 3313* (W--2197084).

LIPPIA ROTUNDIFOLIA var. *BAHIENSIS* Mold., *Phytologia* 48: 290--291. 1981.

Bibliography: Mold., *Phytologia* 48: 290--291 (1981) and 50: 247 & 269. 1982.

Collectors describe this plant as an herb with "rather lignified shoots", to 1.5 m. tall, and have encountered it in cerrado (tall savanna woodland). The corollas are said to have been "mauve-purple with a yellow throat" on the Ratter collection, cited below, and "rose with a yellow center" on the Héring collection. The Ratter collection was previously incorrectly cited by me as typical *L. rotundifolia* Cham.

Additional & emended citations: BRAZIL: Bahia: *Mori 12919* (Ld--type). Distrito Federal: *Héring, Figueiras, Mendonça, Pereira, Salles, & Chagas e Silva 5392* (W--2926855); *Ratter, Fonseca, & Castro R.2600* (N).

LIPPIA ROTUNDIFOLIA var. *CORDATA* Mold., *Phytologia* 52: 414. 1983.

Bibliography: Mold., *Phytologia* 52: 414 (1983) and 54: 236. 1983.

Citations: BRAZIL: Distrito Federal: *Héring 14827* (N--type).

LIPPIA RUBIGINOSA Schau.

Additional bibliography: Mold., *Phytologia* 48: 260. 1981.

Landrum describes this plant as a shrub, 1.5 m. tall, with white corollas, and found it growing among mainly shrubby vegetation on a very rocky iron-rich substrate, at 1200--1700 m. altitude, in both flower and **fruit in February**.

Additional citations: BRAZIL: Minas Gerais: *Landrum 4254* (N); *Macedo 2071* (W--2196797).

LIPPIA SALAMENSIS Loes.

Additional bibliography: Mold., *Phytologia* 48: 260. 1981.

Additional citations: GUATEMALA: Morazán: *Seler 3404* [Macbride photos 17538] (W--1205988--cotype, W--photo of cotype).

LIPPIA SALICIFOLIA Anderss.

Additional bibliography: C. Muell. in Walp., *Ann. Bot. Syst.* 5: 707. 1860; Mold., *Phytologia* 48: 261. 1981.

LIPPIA SALSA Griseb.

Additional bibliography: Mold., *Phytologia* 48: 261. 1981.

Recent collectors have found this plant in flower in November. The corollas are said to have been "white" on *Burkart & al. 30583* and "lilac-white" on *Burkart & al. 30600*.

Additional citations: ARGENTINA: Santiago del Estero: *Burkart, Troncoso, Bacigalupo, Guaglianone, Rotman, & Ulibarri 30583* (Me--204554), *30600* (Me--203020, W--2928384). MOUNTED ILLUSTRATIONS: *Ragonese, Revist. Invest. Agric.* 5: 209, fig. 44. 1951 (Ld).

LIPPIA SALVIAEFOLIA Cham.

Additional bibliography: Mold., *Phytologia* 48: 261. 1981.

Recent collectors describe this plant as a shrub, 1--3 m. tall, and have found it in flower in January and February. The corollas are described as having been "white" on *Shepherd & Gibbs 11248*, "cream" on *Mantovani 1678*, and "yellowish" on *Mantovani 1560*.

Additional citations: BRAZIL: S \tilde{a} o Paulo: *Mantovani 1560* (N), *1678* (N); *Shepherd & Gibbs 11248* (N). PARAGUAY: *Balansa 4624* (Me--243966).

LIPPIA SAVORYI Meikle

Additional & emended bibliography: Meikle in Brenan & al., *Kew Bull.* 17: 173--174. 1963; Mold., *Phytologia* 48: 261. 1981.

LIPPIA SCABERRIMA Sond.

Additional bibliography: Power & Tutin, *Am. Journ. Pharm.* 79: 449--462. 1907; *Journ. Pharm. Chem.*, ser. 6, 26: 414--415. 1907; Wehmer, *Pflanzenst.*, ed. 1, 646. 1911; Hubert, *Trav. Lab. Mat. M \acute{e} d. Fac. Pharm.* 12: [Verb. Util. Mat. M \acute{e} d.] 40--41. 1921; Wehmen, *Pflanzenst.*, ed. 2, 1021. 1931; Mold., *Phytologia* 48: 261--262. 1981.

Wehmer (1931) records the vernacular name "beukess boss" for this plant in South Africa. He reports that the dried plant yielded volatile formic acid, heptacosan, alcohol, hentriacontan, phytosterin, fatty oil with formic, buteric, valerianic, arachinic, stearinic, palmitic, & linolic acids, lippianol, a glycoside, tannin, etc.

Recent collectors have encountered this plant in sandy soil, describing it as aromatic.

Material of *Lippia scaberrima* has been misidentified and distributed in some herbaria as *Lantana* sp.

Additional citations: SOUTH AFRICA: *Giess 154* (Mu).

LIPPIA SCHLIMII Turcz.

Additional bibliography: Mold., *Phytologia* 48: 262 (1981) and 52: 119. 1982.

Melampy encountered this plant in dry shrub-dominated areas at 2500 m. altitude.

Additional citations: COLOMBIA: Boyac \acute{a} : *Melampy 472* (W--2916213).

MOUNTED ILLUSTRATIONS: L \acute{o} pez-Palacios, *Fl. Venez. Verb.* [445], fig. 104. 1977 (Ld).

LIPPIA SCHLIMII var. **GLABRESCENS** (Mold.) Mold.

Additional bibliography: Mold., *Phytologia* 48: 262--263. 1981.

Bunting & Croat describe this plant as a tree, 4 m. tall, and found it in flower in August, the corollas "white".

Additional citations: VENEZUELA: M \acute{e} rida: *Bernardi 10837* (N, W--2914667). T \acute{a} chira: *Bunting & Croat 38469* (Ld); *Croat 55004* (Ld); *Luteyn, Lebr \acute{o} n-Luteyn, & Ruiz-Ter \acute{a} n 5994* (Mi). MOUNTED ILLUSTRATIONS: L \acute{o} pez-Palacios, *Fl. Venez. Verb.* [447], fig. 105. 1977 (Ld).

LIPPIA SCHOMBURGKIANA Schau.

Additional synonymy: *Lippia schomburghiana* Schau., in herb.

Additional & emended bibliography: Bocq., *Adansonia*, ser. 1 [Baill, Rec. Obs. Bot.], 3: 244. 1863; Mold., *Phytologia* 48: 263 (1981) and 56: 442. 1984.

Recent collectors describe this plant as an herb, 50 cm. tall, the leaves coriaceous, "com silca", with a pleasant odor, the flowers fragrant, and the fruit brown. They have found it growing in dry cerrado subject to periodic fires, in caatinga, and common in red sandy soil of capoeira in disturbed *Orbignya* forests, in flower in April, August, and September, and in fruit in September.

The corollas are described as having been "white" on *Martins & Angélica 8342*, "cream" on *Héringer 18056*, and "yellow" on *Chagas & Silva 206*.

The vernacular names, "alecrim" and "gapu-che-le", are reported for the plant in Brazil, where Balick and his associates note that "when a woman is menstruating and a man has intercourse with her and he gets an infection or has other problems, he makes a tea of the leaves of this plant and drinks it."

Material of *Lippia schonburgkiana* has been misidentified and distributed in some herbaria as the very similar *L. origanoides* H.B.K. On the other hand, the *Steward & al. 248*, distributed as *L. schomburgkiana*, actually is *L. microphylla* Cham.

Additional citations: BRAZIL: Ceara: *Martins & Angélica*, Herb. Prisco Bezerra 8342 (F--1931271). Distrito Federal: *Chagas & Silva 206* (N); *Héringer 15788* (W--2926759); *Héringer, Filgueiras, Mendonça, & Pereira 532* (W--2926755). Goiás: *Balick, Frazão, Vieira, & Silva 1590* (Ld); *Héringer 18056* (W--2926775). MOUNTED ILLUSTRATIONS: López-Palacios, F. Venez. Verb. [451], fig. 106. 1977 (Ld).

LIPPIA SCLEROPHYLLA Briq.

Additional bibliography: Mold., *Phytologia* 48: 263. 1981.

Casas & Molero describe this plant as 1 m. tall and found it growing in "prados con rosales de bosque, abundante ganado" and in open rather high forests, in both flower and fruit in February. The corollas are said to have been "white" on their no. 6311 and "white with a yellow center" on no. 6347.

Material of *Lippia sclerophylla* has been misidentified and distributed in some herbaria as *Aloysia* sp.

Additional citations: PARAGUAY: Casas & Molero FC.6255(N), 6311 (Ld), 6347 (Ld).

LIPPIA SERICEA Cham.

Additional bibliography: Silva, SANO, & Silva, An. Congres. Nac. Bot. 32: 21. 1981; Mold., *Phytologia* 48: 264 (1981) and 50: 262. 1982.

Héringer and his associates encountered this plant in cerrado, in anthesis in April, and describe the corollas as small and "yellow".

Some workers regard *Lippia stoechas* Briq. as a synonym of *Lippia sericea*, but it seems clear to me that it belongs in the synonymy of the lamiaeous *Lavandula stoechas* L.

Additional citations: BRAZIL: Distrito Federal: *Héringer, Figueiras, Mendonça, Pereira, Salles, & Silva 4361* (N). Goiás: *Irwin, Santos, Souza, & Fonseca 24378* (W--2630593). [to be continued]